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EXAMINER

CHERRY, STEPHEN J

ART UNIT PAPER NUMBER

2863

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/653,034

Applicant(s)

KING ET AL.

Examiner

Stephen J. Cherry

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-22, 25-26, 29-34 and 35 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 23, 24, 27 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 12, 14-22, 25, 29-32, and 34-35 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,829,725 to Gurumoorthy et al.

Claim 1 recites, as disclosed by Gurumoorthy:

1. A method of monitoring the health of a system module in a system during state transitioning, wherein the system further includes a monitor module operationally connected to the system module ('725, col. 6, line 38, "watchdog timer" part of system, 20), the method comprising: - the system module outputting a status signal for predetermined system status

points during state transitioning of the system module ('725, col. 6, line 21 and 42, "attempt to launch operating system", and "operating successfully launches"); and - the monitor module being operable to start a timer on detecting a first status signal and resetting the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20, and fig. 3, 212).

Claim 2 recites, as disclosed by Gurumoorthy:

2. The method of claim 1, wherein the state transitioning comprises at least one  
  
of starting the system module ('725, col. 6, line 20) and shutting down the system module.

Claim 3 recites, as disclosed by Gurumoorthy:

3. The method of claim 1, wherein a signal is output by the system module for at  
  
least one of the following system status points, namely: at power on self test start; at power on self test end; at power on or reset; at an end of initial hardware power up, on starting booting ('725, col. 6, line 20), on ending booting, on a shutdown or panic power-off and on a system reset.

Claim 4 recites, as disclosed by Gurumoorthy:

4. The method of claim 1, wherein the timer is reset on detecting each of a set of

successive status signals, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a respective determined period for each of a plurality of pairs of successive status signals ('725, col. 6, line 24)

Claim 5 recites, as disclosed by Gurumoorthy:

5. The method of claim 1, wherein an initial period for the timer is determined to exceed an expected maximum time to a subsequent status signal assuming a healthy system module ('725, col. 6, line 20, and fig. 3).

Claim 6 recites, as disclosed by Gurumoorthy:

6. The method of claim 5, wherein the monitor module is operable to set the configuration of the system module, and wherein the monitor module is operable to use information about the configuration to compute a determined period to be applied for the timer ('725, col. 6, line 24, module selects operating system, and corresponding times).

Claim 7 recites, as disclosed by Gurumoorthy:

7. The method of claim 5, wherein the system module is operable to inform the monitor module of a determined period to be applied for the timer ('725, col. 6, line 24).

Claim 8 recites, as disclosed by Gurumoorthy:

8. The method of claim 5, wherein the system module is operable to provide the

monitor module with details of the configuration of the system module, and wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer ('725, col. 6, line 24).

Claim 9 recites, as disclosed by Gurumoorthy:

9. The method of claim 5, wherein the monitor module is operable to interrogate the system module to determine details of the configuration of the system module, and wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer ('725, col. 6, line 20, monitor interagates system for status of OS load, status determines subsequent OS load and corresponding time).

Claim 12 recites, as disclosed by Gurumoorthy:

12. The method of claim 1, wherein the monitor module is a service processor ('725, col. 6, line 20, monitor processes startup routine).

Claim 14 recites, as disclosed by Gurumoorthy:

14. A computer system configured to receive a system module and comprising a monitor module operationally to be connected to the system module ('725, col. 6, line 38, "watchdog timer" part of system, 20), wherein: - the monitor module is operable to start a timer on detecting a first status signal output by a received system module at one of predetermined system status

points during state transitioning of the system module; and - the monitor module is operable to reset the timer on detecting a subsequent status signal output by a received system module at another predetermined system status point during state transitioning of the system module, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20, and fig. 3, 212).

Claim 15 recites, as disclosed by Gurumoorthy:

15. The computer system of claim 14, wherein the state transitioning comprises at least one of starting the system module ('725, col. 6, line 20) and shutting down the system module.

Claim 16 recites, as disclosed by Gurumoorthy:

16. The computer system of claim 14, wherein the monitor module is responsive to signals output by a received system module for at least one of the following system status points, namely: at power on self test start; at power on self test end; at power on or reset; at an end of initial hardware power up, on starting booting ('725, col. 6, line 20), on ending booting, on a shutdown or panic power-off and on a system reset.

Claim 17 recites, as disclosed by Gurumoorthy:

17. The computer system of claim 14, wherein the timer is operable to be reset on detecting each of a set of subsequent status signals, whereby the

timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a respective determined period for each of a plurality of pairs of successive status signals ('725, col. 6, line 24)

Claim 18 recites, as disclosed by Gurumoorthy:

18. The computer system of claim 14, wherein an initial period for the timer is determined to exceed an expected maximum time to a subsequent status signal assuming a healthy system module ('725, col. 6, line 20, and fig. 3).

Claim 19 recites, as disclosed by Gurumoorthy:

19. The computer system of claim 18, wherein the monitor module is operable to set the configuration of the system module, and wherein the monitor module is operable to use information about the configuration to compute a determined period to be applied for the timer ('725, col. 6, line 24, module selects operating system, and corresponding times).

Claim 20 recites, as disclosed by Gurumoorthy:

20. The computer system of claim 18, wherein the monitor module is responsive to a system module providing a determined period to be applied for the timer ('725, col. 6, line 24).

Claim 21 recites, as disclosed by Gurumoorthy:

21. The computer system of claim 18, wherein the monitor module is responsive to a system module providing details of the configuration of the



system module, and wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer ('725, col. 6, line 24).

Claim 22 recites, as disclosed by Gurumoorthy:

22. The computer system of claim 18, wherein the monitor module is operable to interrogate the system module to determine details of the configuration of the system module, and wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer ('725, col. 6, line 20, monitor interagates system for status of OS load, status determines subsequent OS load and corresponding time).

Claim 25 recites, as disclosed by Gurumoorthy:

25. The computer system of claim 14, wherein the monitor module is a service processor ('725, col. 6, line 20, monitor processes startup routine).

Claim 29 recites, as disclosed by Gurumoorthy:

29. A system module for a computer system configured to receive said system module and comprising a monitor module to be operationally connected to the system module, the system module being operable to output status signals at predetermined system status points during state transitioning of the system module, whereby the monitor module is operable to set a time on receipt of a first such status signal and to reset the timer on detecting a subsequent status signal, and whereby the timer

is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20, and fig. 3, 212).

Claim 30 recites, as disclosed by Gurumoorthy:

30. The system module of claim 29, wherein the state transitioning comprises at least one of starting the system module and shutting down the system module ('725, col. 6, line 20).

Claim 31 recites, as disclosed by Gurumoorthy:

31. The system module of claim 29, wherein the system module is operable to output a status signal for at least one of the following system status points, namely: at power on self test start; at power on self test end; at power on. or reset; at an end of initial hardware power up, on starting booting ('725, col. 6, line 20), on ending booting, on a shutdown or panic power-off and on a system reset.

Claim 32 recites, as disclosed by Gurumoorthy:

32. The system module of claim 29, wherein the system module is operable to provide the monitor module with an indication of the determined period to be applied for the timer ('725, col. 6, line 24).

Claim 34 recites, as disclosed by Gurumoorthy:

34. A carrier medium carrying instructions for monitoring the health of a system module in a system during power transitioning, wherein a monitor module is operationally connected to the system module and the system

module is operable to output a status signal at predetermined system status points during at least one of starting the system module and shutting down the system module, the instructions being operable to control the monitor module:

- to start a timer on detecting a first status signal; and
- to reset the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20 and fig. 3, the carrier is 10 and 12 indicated in fig. 1).

Claim 35 recites, as disclosed by Gurumoorthy:

35. A computer system comprising a system module and a monitor module operationally connected to the system module, wherein:

- the system module comprises means for outputting a status signal for predetermined system status points during state transitioning of the system module; and
- the monitor module comprises means for start a timer on detecting a first status signal and for resetting the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20 and fig. 3).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,829,725 to Gurumoorthy et al in view of U.S. Patent 6,688,965 to Crippen et al.

The claims recite, as disclosed by Crippen:

the system module outputting a status signal for predetermined system status points during state transitioning of the system module ('725, col. 6, line 21 and 42, "attempt to launch operating system", and "operating successfully launches"); and - the monitor module being operable to start a timer on detecting a first status signal and resetting the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20, and fig. 3, 212), wherein the monitor module is a service processor ('725, col. 6, line 20, monitor processes startup routine).

monitor module operationally to be connected to the system module ('725, col. 6, line 38, "watchdog timer" part of system, 20), wherein: - the monitor module is operable to start a timer on detecting a first status signal output

by a received system module at one of predetermined system status points during state transitioning of the system module; and - the monitor module is operable to reset the timer on detecting a subsequent status signal output by a received system module at another predetermined system status point during state transitioning of the system module, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20, and fig. 3, 212); wherein the monitor module is a service processor ('725, col. 6, line 20, monitor processes startup routine).

a monitor module to be operationally connected to the system module, the system module being operable to output status signals at predetermined system status points during state transitioning of the system module, whereby the monitor module is operable to set a time on receipt of a first such status signal and to reset the timer on detecting a subsequent status signal, and whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period ('725, col. 6, line 20, and fig. 3, 212).

However, Gurumoorthy does not teach the use of blade systems.

The claims further recite, as disclosed by Crippen, a rack mountable blade system ('965, fig. 1).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the blade system of Crippen with the invention of Gurumoorthy to allow high reliability operation ('965, col. 1, line 12).

***Allowable Subject Matter***

Claims 10-11, 23-24, and 27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 10 recites, "wherein the monitor module is operable to record a time for a given pair of status signals on a given initiation of the system and to adapt the determined period for a subsequent system initiation". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 11 recites, "wherein the monitor module is operable to record a time between a given pair of status signals on a given initiation of the system and to employ a determined period equal to a multiple of the actual time between a given pair of status signals for a subsequent system initiation". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 23 recites, "wherein the monitor module is operable to record a time for a given pair of status signals on a given initiation of the system and to adapt the determined period for a subsequent system initiation". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 24 recites, "wherein the monitor module is operable to record a time between a given pair of status signals on a given initiation of the system and to employ a determined period equal to a multiple of the actual time between a given pair of status signals for a subsequent system initiation". This feature in combination with the remaining claimed structure avoids the prior art of record.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,550,019 to Ahrens et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2863

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJC



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